

EUTERMES EXITIOSUS HILL, 1925 (INSECTA, ISOPTERA):
PROPOSED CONSERVATION BY USE OF THE PLENARY
POWERS. Z.N.(S.)2290

By J.A.L. Watson & F.J. Gay (*Division of Entomology, CSIRO,
P.O. Box 1700, Canberra City, A.C.T. 2601, Australia*)

The purpose of this proposal is to ask the International Commission to use its plenary powers to suppress a specific name because of the confusion that the adoption of the name would cause, and because it has not been used as a valid name for more than 50 years.

2. Walker, 1853, p. 525, described *Termes australis* from two alates in the British Museum (Natural History), the first mentioned from 'Adelaide' and the other from 'New Holland'. The Adelaide specimen was collected by A.H. Davis some time prior to 1844, when it was accessed from the Entomological Club into the collections of the Museum. The second specimen is apparently lost (W.A. Sands, personal communication).

3. Hagen, 1858, p. 173, identified as *Termes australis* alate material of unknown provenance in the Vienna Museum, and alates in his own collection from the East Indies, and described and figured them. The description does not agree closely with Walker's, and the figure (pl. 3, fig. 22) appears to be one of a kalotermitid, rather than a termitid.

4. Froggatt, 1898, p. 738, redescribed alates of *Termes australis* from dried material collected at light in Adelaide, and figured a wing (pl. 35, fig. 1). We have not been able to trace Froggatt's material, and its identity is uncertain. The description is generally compatible with Walker's, but differs in details of antennal segmentation, shape of pronotum, and wing venation, which are more closely comparable with those of species of *Coptotermes* Wasmann (Watson & Gay, 1980). Froggatt's illustration is not very informative; dimensions and venation do not agree with the description.

5. Desneux, 1904, p. 34, placed *australis* in *Coptotermes*, then regarded as a subgenus of *Termes* Linnaeus. He did not give reasons for this placement.

6. Bugnion & Popoff, 1910, p. 121, Holmgren, 1911, p. 73, and Mjöberg, 1920, p. 124, placed *australis* in the genus *Coptotermes*, also without comment.

7. Hill, 1926, p. 203, tentatively regarded *australis* as a *Coptotermes*, and discussed the problems associated with that placement. Unable to examine the types, he relied on notes made by Sir Guy Marshall. In a letter dated 3rd December, 1925, now

preserved in records associated with the Australian National Insect Collection, Canberra, Marshall compared 'the unique type' (presumably the second specimen, from New Holland, was already missing) with alates of *Coptotermes acinaciformis* (Froggatt) and *Coptotermes frenchi* Hill (then known as *Coptotermes flavus* Hill), the only species of *Coptotermes* known from Adelaide (Hill, 1942; Calaby & Gay, 1956). Marshall also sketched the surviving syntype. Hill concluded that if *australis* was indeed a *Coptotermes*, it was 'clearly distinct from any member of the genus as yet recorded from this Region'; and that the pronotum was 'distinctly *Eutermes*-like in outline'. The sketch, preserved with Marshall's letter, is a reasonable likeness of the Adelaide syntype, and confirms Hill's opinion (Watson & Gay, 1980).

8. Hill, 1942, p. 10, did not include *australis* in his account of the Australian Isoptera, on the grounds that it could not 'be identified with any more recently described species', and referred to Hill, 1926, p. 203. Snyder, 1949, p. 348, also regarded *australis* as a species that could not be classified, and provided a bibliography of it.

9. Watson & Gay, 1980, pp. 19-22, figs. 1-2, re-examined the Adelaide syntype of *Termes australis*, designated it the lectotype of the species, and showed that *Termes australis* is a senior subjective synonym of *Eutermes exitiosus* Hill, 1925.

10. Hill, 1925, p. 222, figs. 30-35, described *Eutermes exitiosus* from complete nest series from Ludlow, Western Australia, and other localities in the south-west of that State, and from South Australia and Victoria. In 1942, p. 214, figs. 111-113, he redescribed the species, including material from New South Wales and Queensland, and commented on its biology and economic importance.

11. Snyder, 1949, p. 276, transferred *exitiosus* to the genus *Nasutitermes* Dudley.

12. This species is one of the most extensively studied of the Australian termites, and causes substantial damage to timber in service. More than 50 papers, involving more than 20 authors, have been published from our laboratory alone, dealing with its taxonomy, general biology, development, behaviour, economic importance, and the resistance of materials. Other papers have been published from other laboratories, some directed specifically to non-entomologists involved in termite control. All these publications have referred to the species as *exitiosus*. The following fifteen references serve as examples, and satisfy the requirements of Article 79b: Holdaway, Gay & Greaves, 1935 (population of colonies); Fyfe & Gay, 1938 (relative humidity in mounds); Hill, 1942 (taxonomy, general biology); Holdaway & Gay, 1948 (temperatures in

mounds); Gay, Greaves, Holdaway & Wetherly, 1955 (standard techniques for laboratory testing of materials); Gay, Greaves, Holdaway & Wetherly, 1957 (standard techniques for field testing of materials); Moore, 1964 (pheromones); Rudman, 1965 (effects of extractives from resistant timber); Gay & Wetherly, 1969 (resistance of plastics); Gibbs, Gay & Wetherly, 1970 (termite virus); Lee & Wood, 1971 (termites and soils); McMahan and Watson, 1975 (development of castes); Kriston, Watson & Eisner, 1977 (behaviour of soldiers); McMahan, 1977 (polyethism); and Watson, Ruyooka & Howick, 1978 (caste composition and feeding activity). Because of the synonymy (paragraph 9 above) and the extent and diversity of non-taxonomic usage of the name *exitiosus*, we would prefer that the name *australis* be suppressed outright, rather than that its junior subjective synonym *exitiosus* be given nomenclatural precedence.

13. We therefore ask the International Commission on Zoological Nomenclature:

- (1) to use its plenary powers to suppress the specific name *australis* Walker, 1853, as published in the binomen *Termes australis*, for the purposes of the Law of Priority but not for those of the Law of Homonymy;
- (2) to place on the Official List of Specific Names in Zoology the specific name *exitiosus* Hill, 1925, as published in the binomen *Eutermes exitiosus*;
- (3) to place on the Official Index of Rejected and Invalid Specific Names in Zoology the name *australis* Walker, 1853, as published in the binomen *Termes australis*, and as suppressed by use of the plenary powers in (1) above.

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